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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/576,113	05/22/2000	Marijn E. Brummer	5543-5	2804

826 7590 04/21/2004

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EXAMINER
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LU, TOM Y

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 04/21/2004

14

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/576,113

Applicant(s)

BRUMMER, MARIJN E.

Examiner

Tom Y Lu

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendment and written response filed on April 07, 2004 has been entered upon entry of Request for Continued Examination.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1, 8 and 14 have been considered but are deemed to be moot in view of the new grounds of rejection.

### ***Allowable Subject Matter***

3. The indicated allowability of claims 2-5 is withdrawn in view of the newly discovered reference(s) to Ebrahimifard et al (U.S. Patent No. 6,396,897 B1). Rejections based on the newly cited reference(s) follow.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Ebrahimifard et al (U.S. Patent No. 6,396,897 B1).

a. Referring to Claim 1, Ebrahimifard discloses an imaging device for acquiring one or more plane images of the subject (a computed tomography imaging system 10, column 2, line 40); a 3-D model device, in combination with the imaging device,

for generating a 3-D model based upon the one or more plane images acquired from the imaging device (Ebrahimifard at column 3, lines 17-18, teaches generating a first three-dimensional model from a set of imaging data, which is obtained from CT imaging system 10); an input device for receiving operator input (Ebrahimifard at column 3, lines 3-4, teaches computer 36 receives commands and scanning parameters from an operator via console 40 that has a keyboard. Console 40 is the claimed "input device"), wherein the operator input defines a pre-acquisition operator defined plane in addition to said one or more plane images acquired from the imaging device (the Region of Interest selected by the operator as described at column 3, lines 26-27 is the claimed "pre-acquisition operator defined plane"), and wherein a pre-acquisition scan model (DFOV is the claimed "pre-acquisition model", column 3, line 45) of the operator defined plane is incorporated into the 3-D model; and a display (cathode ray tube display 42, column 3, line 5) for presenting the 3-D model, wherein the 3-D model includes the operator defined plane, such that the operator can define an orientation of the operator defined plane in relation to one or more subject landmarks defined by the plane image acquired from the imaging device (the operator defines DFOV by using x, y and z coordinates, which the orientation of the region of interest plane is in relation to other landmarks defined by the plane images acquired from the imaging device).

- b. Referring to Claim 2, Ebrahimifard discloses a scan geometry module (console 40) that communicates with the input device to receive the operator input

(operator inputs 102), wherein the scan geometry module generates scan geometry parameters (operator-specified ROI parameters, column 3, line 41) representative of the operator input and communicates the scan geometry parameters to the imaging device such that the imaging device can acquire the operator define plane (column 3, lines 26-39).

- c. Referring to Claim 3, Ebrahimifard discloses wherein the 3-D model device updates the 3-D model to include the acquired operator define plane (column 3, lines 40-41, upon entry of the ROI parameters, a new display field of view is determined, and the 3-D model is updated in accordance).
- d. Referring to Claim 4, Ebrahimifard discloses wherein the input device enables the operator to define a new operator defined plane after the 3-D model has been updated to include the previous acquired operator defined plane (DFOV includes ROI).
- e. Referring to Claim 5, Ebrahimifard discloses wherein the 3-D model device includes a scan model, for receiving the scan geometry parameters, and a subject model, for receiving image data from the imaging device (image reconstructor 34).
- f. Referring to Claim 6, Ebrahimifard discloses wherein the imaging device is selected from one of the group consisting of a magnetic resonance imaging scanner and an ultrasound machine (column 1, lines 10-11 and column 2, line 40).
- g. Referring to Claim 7, Ebrahimifard discloses wherein the input device enables the operator to alter the orientation of the operator defined plane in the 3-D model,

such that the operator can interactively manipulate and view, via the display, the defined plane in the 3-D model to facilitate the determination of a desired operator defined plane (column 3, lines 26-39).

- h. With regard to Claim 8, all limitations are addressed in Claim 1.
- i. With regard to Claim 9, all limitations are addressed in Claim 2.
- j. With regard to Claim 10, all limitations are addressed in Claim 3.
- k. With regard to Claim 11, all limitations are addressed in Claim 4.
- l. With regard to Claim 12, all limitations are addressed in Claim 7.
- m. With regard to Claim 13, all limitations are addressed in Claim 7.
- n. With regard to Claim 14, the only difference between Claim 1 and Claim 14 is Claim 14 calls for additional limitation of a computer program, which Ebrahimifard teaches use of computer system 36, which inherently contains a computer program.
- o. With regard to Claim 15, all limitations are addressed in Claim 10.
- p. With regard to Claim 16, all limitations are addressed in Claim 12.
- q. With regard to Claim 17, all limitations are addressed in Claim 11.
- r. With regard to Claim 18, all limitations are addressed in Claims 1 and 2.
- s. With regard to Claim 19, all limitations are addressed in Claim 3.
- t. With regard to Claim 20, all limitations are addressed in Claim 4.
- u. With regard to Claim 21, all limitations are addressed in Claim 5.

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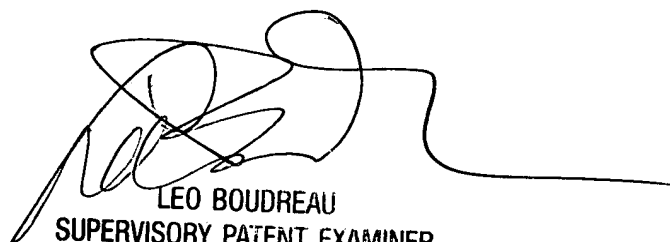
***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Y Lu whose telephone number is (703) 306-4057. The examiner can normally be reached on 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on (703) 305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Y. Lu



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